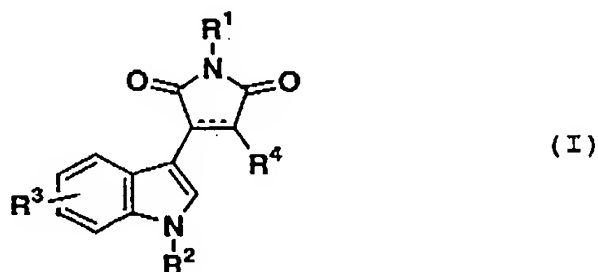


Claims

1. A cell death inhibitor comprising, as an active ingredient, an indolylmaleimide derivative represented by the following formula (I):



wherein R¹ represents an alkyl group which may be substituted, an alkenyl group which may be substituted, an aryl group which may be substituted, hydroxyl group, an alkoxyl group which may be substituted, an aryloxy group which may be substituted, an amino group which may be substituted, or hydrogen atom; R² represents hydrogen atom, an alkyl group which may be substituted, an alkenyl group which may be substituted, an alkynyl group which may be substituted, an aryl group which may be substituted, an acyl group which may be substituted, an alkoxy- or aryloxycarbonyl group which may be substituted, an alkyl- or arylthiocarbonyl group which may be substituted, an aminocarbonyl group which may be substituted, an alkyl- or arylsulfonyl group which may be substituted, an alkoxyl group which may be substituted, an aryloxy group which may

be substituted, or hydroxyl group; R^1 represents substituent(s) on an indole ring, and represents, number and position (2-, 4-, 5-, 6-, or 7-position as position number of the indole ring) of the substituent(s) and kinds of the substituent(s) may be the same or different, hydrogen atom, an alkyl group which may be substituted, an alkenyl group which may be substituted, an alkynyl group which may be substituted, an aryl group which may be substituted, an acyl group which may be substituted, an alkoxy- or aryloxy carbonyl group which may be substituted, an alkoxy- or aryloxy carbonyloxy group which may be substituted, an alkyl- or arylthio carbonyl group which may be substituted, an aminocarbonyl group which may be substituted, an alkyl- or arylsulfonyl group which may be substituted, an alkoxyl group which may be substituted, an aryloxy group which may be substituted, an alkyl- or arylthio group which may be substituted, hydroxyl group, carboxyl group, cyano group, nitro group, an amino group which may be substituted, or a halogen atom; R^4 represents hydrogen atom, an alkyl group which may be substituted, an alkenyl group which may be substituted, an alkynyl group which may be substituted, an aryl group which may be substituted (except 3-indolyl group), an acyl group which may be substituted, an alkoxy- or aryloxy carbonyl group which may be substituted, an alkyl- or arylthio carbonyl group which may be substituted, an aminocarbonyl group

which may be substituted, an alkyl- or arylsulfonyl group which may be substituted, an alkoxy group which may be substituted, an aryloxy group which may be substituted, alkyl- or arylthio group which may be substituted, hydroxyl group, carboxyl group, cyano group, nitro group, or amino group which may be substituted; R² and R³, R³ and R⁴, R³ and R⁴ may be combined to form a hydrocarbon chain which may be substituted; and in the formula, the bond accompanying a dotted line represents a double bond or a single bond, or a pharmaceutically acceptable salt thereof.

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2. A drug for treating or preventing progress of symptoms, through inhibiting death of neurons, of neurodegenerative diseases such as Alzheimer's disease, spinal muscular atrophy (SMA), amyotrophic lateral sclerosis (ALS), Parkinson's disease, Huntington's disease, pigmentary degeneration of the retina, glaucoma and cerebellar degeneration, comprising a indolylmaleimide derivative represented by the above formula (1) ^{of Claim 1} or a pharmaceutically acceptable salt thereof as an active ingredient.

3. A drug for treating or preventing progress of symptoms, through inhibiting death of neurons, of neonatal jaundice, comprising a indolylmaleimide derivative

represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

4. A drug for treating or preventing progress of symptoms, through inhibiting cell death, of myasthenia gravis, comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

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5. A drug for treating or preventing progress of symptoms, through inhibiting death of neurons, of brain ischemia and delayed neuronal death (DND), comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

6. A drug for treating or preventing progress of symptoms, through inhibiting death of myocardial cells, of ischemic heart disease, viral myocarditis, autoimmune myocarditis, myocardial disorders/cell death due to hypertrophic heart and heart failure, or arrhythmogenic right ventricular cardiomyopathy, comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

7. A drug for treating or preventing progress of symptoms, through inhibiting death of hepatic cells, of alcoholic hepatitis or viral hepatitis, comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

8. A drug for treating or preventing progress of symptoms, through inhibiting death of renal cells, of renal diseases, comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

9. A drug for treating or preventing progress of symptoms, through inhibiting excessive death of T-cells, of acquired immunodeficiency syndrome (AIDS), comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

10. A drug for treating or preventing progress of symptoms, through inhibiting cell death, of inflammatory skin disorders, alopecia, or graft versus host disease (GVH), comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

11. A drug for treating or preventing disorders or side effects, through inhibiting cell death, of disorders due to radiation or drugs, comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

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12. A drug for treating or preventing progress of symptoms, through inhibiting cell death, of sepsis, comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

13. A drug for treating or preventing progress of symptoms, through inhibiting death of cells derived from bone marrow, of osteomyelo-dysplasia, comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

14. A drug for treating or preventing progress of symptoms, through inhibiting cell death, of insulin dependent diabetes, comprising a indolylmaleimide derivative represented by the above formula [II] or a

pharmaceutically acceptable salt thereof as an active ingredient.

15. A drug for treating or preventing progress of symptoms, through inhibiting death of neurons, of prion diseases, comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

M 16. A drug for treating or preventing functional deficiency of transplanted organs, tissues or cells at transplantation of organs, tissues or cells, comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.

17. A preservative for organs, tissues or cells, comprising a indolylmaleimide derivative represented by the above formula (I) or a pharmaceutically acceptable salt thereof as an active ingredient.